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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,369	12/06/2005	Wolfgang Ens	2003P07168WOUS	3633

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER	
SHABMAN, MARK A	

ART UNIT	PAPER NUMBER
2856	

MAIL DATE	DELIVERY MODE
09/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/559,369	ENS ET AL.	
	Examiner	Art Unit	
	MARK SHABMAN	2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *19 May 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *5-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *5-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoess US Patent 6,076,405 (hereinafter referred to as Schoess).

Regarding **claim 5**, Schoess discloses a remote self-powered structure monitor using a piezoelectric transducer to detect high frequency stress wave acoustic emission energy. This high frequency energy directly correlates to structural issues such as cracks (column 2). Figure 7 shows the electronics and basic layout of the monitor as follows. Piezoelectric element 24 generates a signal in the analog transducer unit (ATU) 16. Piezoelectric element 24 is located in a packaging or "housing" attached to the monitoring surface as seen in figure 2. From the ATU the signal is sent to the common electronics unit (CEU) 26. The circuitry of the CEU splits the signal into two

portions, one which is sent to the Power control module and one which is sent to the signal conditioning module. In the signal conditioning module as seen in figure 8a there exists a bandpass filter 35 which filters out frequencies below 50 kHz (column 5), thus leaving the evaluation signal in the “relatively high spectral range” as claimed. The filter also functions to separate the measurement signal into two portions, the "evaluation signal" and the "supply signal". The measurement signal entering the power control module is used to provide power to the elements in the electronics 18 of the system by charging a lithium battery 36 using the measurement signal. An amplifier 30 is present in the circuit which amplifies the measurement signal, thus amplifying the evaluation signal leaving the signal conditioning module prior to transmission via antenna module 40 to a receiver outside of the housing. The amplifier 30 is not placed "after the filter for signal separation" as is claimed, however there is no mention in the specification as to why the placement after the filter is necessary or beneficial to the overall invention. Likewise, there is no mention in the specification as to the benefits of not amplifying the supply signal as is claimed and therefore doing moving the amplifier would cause no negative effects on the invention as a whole. Further, it would have been obvious to one of ordinary skill in the art at the time of invention to move the amplifier to the claimed location, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse,* 86 USPQ 70 (CCPA 1950). Schoess does not disclose a converting the monitoring signal into a supply signal "in the relatively low spectral range" as claimed, however figure 7 shows in the power control module a smoothing filter for smoothing the signal used for the supply. It was well known in the

art at the time of invention that smoothing filters are commonly low-pass filters which help to eliminate unwanted peaks and spikes in the signal. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a low-pass filter on the measurement signal to generate a supply signal in the lower end of the spectral range to provide a more stable, constant power supply to self-power the electronic circuit.

Regarding **claim 6**, the electronic circuit seen in figure 7 of Schoess comprises a power control module to generate a supply signal, containing a full-wave rectifier and a smoothing filter as claimed.

Regarding **claim 7**, it would have been obvious to one of ordinary skill in the art at the time of invention to have overlapping ranges of frequencies in the signals to ensure that any potential abnormalities in the detected signal are not accidentally filtered out.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK SHABMAN whose telephone number is (571)270-3263. The examiner can normally be reached on M-F 7:30am - 5:00pm, EST (Alternating Fridays Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. S./
Examiner, Art Unit 2856
/Hezron Williams/
Supervisory Patent Examiner, Art Unit 2856